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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/378,227	08/19/1999	TERENCE S. DOWLING	07844/322001	8868
21876	7590	01/10/2005	EXAMINER	
FISH & RICHARDSON P.C. 3300 DAIN RAUSCHER PLAZA MINNEAPOLIS, MN 55402			NGUYEN, CHANH DUY	
			ART UNIT	PAPER NUMBER
			2675	

DATE MAILED: 01/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/378,227

**Applicant(s)**

DOWLING

**Examiner**

Chanh Nguyen

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 August 2004.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-60 and 62-72 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☒ Claim(s) 17-45 and 49-51 is/are allowed.  
6) ☒ Claim(s) 1, 3-6, 10-16, 46-48, 52-60, 62-64, 66, 69, 71 and 72 is/are rejected.  
7) ☒ Claim(s) 2, 7-9, 65, 67-68 and 70 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Response to Amendment***

1. The amendment filed on August 05, 2004 has been entered and considered by examiner.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
4. Claims 1, 3-6, 11-16, 52, 56-60 and 62-64, 66, and 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumada et al. (5,563,725) in view of Engeldorn (5,638,117).

With regard to claim 1, Kumada et al. teaches a display system operable to display each of a plurality of pixels at a visual output intensity relative to an output

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display device according to a corresponding pixel input value, a method for determining device-specific information for pixels to obtain an optimal display of images on an output display device, the input display device having one or more color planes (abstract, figures 24 and 26, column 2, lines 58-63, column 10, lines 8-24, lines 54-67) the method comprising determining a set of device-specific pixel input values, based on user input, (figure 26 items 140, 104 and 104f, figures 32a, 32b, 33a, and 33b, figure 43, figure 52, items 140, 143, and 104f and all associated text teach user inputting monitor type ) that will cause the display system to display a corresponding set of target visual output intensities relative to the output display device (column 29, lines 12-34 and column 30, lines 9-40). Kumada et al. does not illustrate, "the determining step including displaying, a control region and a reference region on the output display device, the control region being defined by a plurality of control pixels, each of the control pixels having a common pixel input value, evaluating the control region and reference region for each color plane of the display device, and adjusting the common pixel input value for the control pixels until a match is achieved between an appearance of the reference region and an appearance of the control region for each colorplane, such that the target visual output intensities are achieved." Engeldrum et al. illustrates in a calibration procedure for displays like Kilmada et al., the above missing limitations in abstract, column 1, lines 5-13, lines 29-32, lines 53-60 and column 2, lines 38-67 and column 3, lines 1-25 and Figures 2-4 . It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Kumada et al. system to use his display the

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display calibration procedure as taught by Engeldnrm because he gives motivation in column 1, lines 29-32.

With regard to claim 3, the combination of Kilmada et al. and Engeldrm et al. was found above in claim 1 to teach most of the limitations of claim 3 in addition the combination also teaches "associating the common pixel input value with the target visual output intensity when a user input indicates a match between the appearance of the reference region and the appearance of the control region" (SEE Engeldrum et al. column 2, lines 29-37).

With regard to claim 4, the combination of Kumada et al. and Engeldrum et al. teaches the method of claim 3, wherein the target visual output intensity is obtained from the user input (SEE Engeldrum et al. column 2, lines 29-37).

With regard to claim 5, the combination of Kumada et al. and Engeldrum et al. teaches the method of claim 3, wherein the numeric value defining the size of the set of pixel input values is obtained from user input (SEE Engeldrum et al. column 2, lines 29-37 when the user picks a match it would have been obvious that there was a numeric value in memory assigned to the color at that intensity ).

With regard to claim 6 the combination of Kilmada et al. and Engeldnrm et al. teaches the method of claim 3, wherein the numeric value defining the size of the set of pixel input values is a pre-programmed numeric value (SEE Engeldnrm et al. Figures 3 and 4 where it is obvious that the boxes illustrated have is a pre-programmed numeric value .)

With regard to claim 11, the combination of Kumada et al. and Engeldrum et al. teaches wherein the output display device is a color output display devices and monochrome output display devices (See Kumada et al. abstract).

With regard to claim 12, the combination of Kumada et al. and Engeldnzm et al. teaches the method of claim 3, further including locating the reference region and the control region in close proximity to each other (SEE Engeldnzm et al. figures 3-4).

With regard to claim 13 the combination of Kumada et al. and Engeldrum et al. teaches the method of claim 3, wherein the number of pixels defining the control region is substantially smaller than the number of pixels defining the reference region other (SEE Engeldrum et al. figures 3-4).

With regard to claim 14, the combination of Kumada et al. and Engeldrum et al. teaches the method of claim 3, wherein the reference region encloses the control region (SEE Engeldrum et al. Figures 3-4)

With regard to claim 15, the combination of Kumada et al. and Engeldnzm et al. teaches the method of claim 3, wherein the reference region and the control region are side-by-side, SEE Engeldrum et al. figures 3-4).

With regard to claim 16, the combination of Kumada et al. and Engeldnzm et al. teaches the method of claim 3, further including evaluating a control region and reference region for each color plane of the display device and adjusting the common pixel input value to achieve a match between the appearance of the reference region and the appearance of the control region for each color plane (SEE Engeldnzm et al. Figures 3-4).

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With regard to claim 52, the combination of Kumada et al. and Engeldrum teaches wherein the determining step further includes displaying a reference region on the output display device, the reference region being defined by a plurality of reference pixels, the displaying step including selecting a pixel input value for each of the reference pixels to produce a target visual intensity (See Engeldrum figures 3 and 4).

With regard to claim 57, the combination of Kumada et al. and Engeldnrm et al. teaches further including locating the reference region and the control region in close proximity to each other (See Engeldnrm figures 3 and 4).

With regard to claim 58, the combination of Kumada et al. and Engeldnrm et al. teaches 58 the method of claim 52, wherein the number of pixels defining the control region is substantially smaller than the number of pixels defining the reference region (See Engeldrum; figures 3 and 4).

With regard to claim 59, the combination of Kumada et al. and Engeldrum et al. teaches the method of claim 52, wherein the reference region encloses the control region (See Engeldrum figures 3 and 4).

With regard to claim 60, the combination of Kumada et al. and Engeldrum et al. teaches wherein the reference region and the control region are side-by-side (See Engeldrum Figures 3 and 4).

With regard to claims 62 and 63, the combination of Kumada et al. and Engeldnrm et al. teaches was shown above to cover all the limitations of 62 and 63.

With regard to claims 64, 66 and 72 the combination of Kumada et al., Engeldrum et al. was found above to teach most of the limitations of claims 64, 66 and

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72 the applicant in addition is claiming a computer program product, tangibly stored on a computer-readable medium" (Since Engeldnrm shows the computer in figure 1 this feature would have been obvious).

5. Claims 46-48, 69, and 71 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Kumada et al. and Engeldnrm et al. applied to claims above, and further in view of Hill et al. (6,278,434).

With regard to claim 46 the combination of Kumada et al. and Engeldrum et al. was shown above in claims to read on most of the broad limitations of claim 46 and 49 in addition applicant is now claiming his display is a liquid crystal display (LCD). Kumada et al. specification does not narrow itself to a specific display type but is directed toward "a plurality of monitor types" (abstract) and therefore a LCD which is conventional is clearly suggested by Kumada as an obvious intended use of the Kumada et al. invention. As an example of a conventional "monitor type" Hill et al. teaches a color LCD display are exemplary of display devices which utilize multiple distinctly addressable elements, referred to herein as pixel sub-elements or pixel sub-components, to represent each pixel of an image being displayed (See Hill et al. column 2, lines 5-10) in which "color distortions such as color fringing is compensated by treating each pixel sub-component independently" (See Hill et al. abstract).

With regard to claims 47, the combination of Kumada et al. Engeldnrm et al., And Hill et al. teaches "a sub-pixel position associated with a given pixel" (it is obvious that



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sub pixels have positions), and "sub-pixel has intensity" (it is inherent that each sub-pixel has an intensity or it would not work).

With regard to claims 48, the combination of Kumada et al., Engeldrum et al. and Hill et al. teach, wherein the liquid crystal display (LCD) device has a RGB color space (see Hill et al. Figure 2B).

With regard to claims 69 and 71, the combination of Kumada et al., Engeldrum et al. and Hill et al. 4 was found above to teach most of the limitations of claims 69 and 71 the applicant in addition is claiming a computer program product, tangibly stored on a computer-readable medium" (Since Engeldrum shows the computer in figure 1 this feature would have been obvious).

6. Claims 10 and 56 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination Kumada et al. (5,563,725) and Engeldrum et al. 4,563,117 as applied to claim 1 above and in further view of Simpson MASTERING WORDPERFECT 5.1 & 5.2 FOR WINDOWS" (COPYRIGHT 1993).

With regard to claims 10 and 56, the combination of Kumada et al. and Engeldrum et al. does not illustrate a slider bar presented on a user interface so that based on user input, the common pixel input value may be adjusted between 111 on and 111 off, inclusive. However, Simpson illustrates this to be a common well known interface (See Simpson figure 5.23 Spectrum).

It would have been obvious to one of ordinary skill in the art at the time the invention

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was made to modify the combination Kumada et al. and Engeldrum et al. system to use a slider bar as taught by Simpson because GUI's such as this provide a quick entry of data without typing.

***Allowable Subject Matter***

5. Claims 17-45, and 49-51 are allowed.
6. Claims 2, 7-9, 53-55, 65, 67, 68, 70 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

7. Applicant's arguments filed August 05, 2004 have been fully considered but they are not persuasive.

As to claims 1, 11, 52 and 56, 60, on page 19, second paragraph, applicant argues that Engeldrum does not teach adjusting the common pixel input value for a control region, i.e., the continuous tone box(es). Engeldrum's continuous tone boxes each display a predetermined intensity of the color (column 3, lines 6-8). No adjustment is made to a common pixel input value for any of the continuous tone boxes. Each is fixed and no adjustment to the intensity setting for a given continuous tone box is taught or suggested. However, examiner would like to present his point as follows: 1) first embodiment of Engeldrum (Fig.2), the brightness of the image or control region (200) can be adjusted to level of bright white in white box or reference region (204) (see column 2, lines 57-67). Thus it is clear the limitation adjusting the common pixel input value for a control region in response to user input until a visual match is achieved

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between the reference region and the control region. 2) second embodiment of Engeldrum (Fig.3), the brightness of the image displayed on the screen or control region (102) can be adjusted to the level of conton box (104) which is the same way as the first embodiment. The different between first and second embodiment In Engeldrum is that the user can click mouse button directly to the tone box after matching with the brightness of stripe (302) rather than using the displayed button (220) as in first embodiment Figure 2. Thus, while each of the continuous tone boxes of Engeldrum is fixed, but the control region (the image displayed on the monitor) is not.

On page 19, second paragraph, applicant argues that "Engedrum does not teach a method for achieving a match between a reference region and a control region" . Examiner totally disagrees with applicant this point of view because the brightness of the image displayed on the monitor or control region (102) can be adjusted to the level of selected color continuous tone box or reference region (i.e. Engedrum states that "an indication of gamma for color being determined by the user selecting which continuous box, e.g. 304, most closely matches the brightness of striped box 302; see column 3,lines 1-25). Thus, while matching the between the continuous tone boxes and the striped box 302 does not read on the limitation adjusting the color between control region and reference region, but matching the color image displayed on the monitor (102) with the selected color tone boxes (304) reads on adjusting the color between control region and reference region, respectively.

Applicant also argues that "in order to a match, Engeldrum would have to be modified to include a tremendous, and impractical, number of continuous tone boxes,

or to be modified include the teachings provided in the instant application as described above". However, even Engeldrum's device has tremendous of the continuous tone boxes to achieve the match, the Engeldrum's device still reads on the claim. The claims do not exclude the continuous tone boxes or the claims does not recite the limitation "without using continuous tone".

As to claim 3-6 and 12-16, applicant presents same arguments a previously discussed with claim 1. Thus, these claims meet on the reference of Kumada in view of Engeldrum as set forth in the rejection.

As to 62-64, 66 and 72, applicant presents same arguments a previously discussed with claim 1. Thus, these claims meet on the reference of Kumada in view of Engeldrum as set forth in the rejection.

As to claims 46-48, 69 and 71, applicant again presents same arguments a previously discussed with claim 1. Thus, these claims meet on the reference of Kumada in view of Engeldrum and Hill as set forth in the rejection.

### ***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### ***Inquiries***

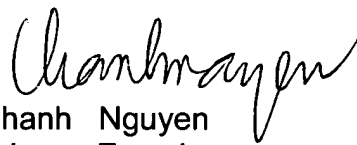
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chanh Nguyen whose telephone number is (703) 308-6603. The examiner can normally be reached on Monday- Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Saras can be reached on (703) 305-9720. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



C. Nguyen  
January 8, 2005



Chanh Nguyen  
Primary Examiner  
Art Unit 2675